



DriveRight

Frequently Asked Questions

Version: January 2006

General Installation

My new DriveRight 600 will not connect to my existing wiring I used with my DriveRight 500.

That is correct. The new DriveRight 600's connector has more pins than the DriveRight 500. Therefore you will need the Upgrade Adapter, part # 8161. This will connect the existing wiring to the new DriveRight 600

How do I know what installation to use?

If your vehicle was manufactured in 1996 or after it will have an OBDII port. If this is the case then you can most likely use the OBD DriveRight installation. In this installation the OBD harness cable will just plug into this OBDII port. There are a few cases where this port will be present but will not be compatible with the OBD install kit. Please contact Technical support at 510-732-7814 to make sure your vehicle is compatible. If your vehicle is not compatible with the OBD installation then the VSS installation will be the next choice. In this installation you use the VSS wire as the input signal. You can find where the VSS wire is on your vehicle at the www.rostra.com website. If your vehicle does not have the VSS wire then you will need to go with the General Duty or Heavy Duty installation. These installations use a magnet that is attached to your drive shaft that passes by a speed sensor that is mounted to vehicle. The heavy Duty is used in larger vehicles or in vehicles that will be used in rugged terrain.

Can I mount the DriveRight on a motorcycle, bus, semi-truck or tractor?

Most likely, yes. The DriveRight uses either a reed switch/magnet combination to count rotations, taps into the VSS (Vehicle Speed Sensor) signal or uses the OBDII port for the signal. If you have access to an OBDII port, to a VSS signal, or to a drive shaft or CV joint that will allow a magnet to be strapped to it and enough room for the reed sensor to be mounted very close by, you should be able to use the DriveRight. It is important that the drive shaft or CV-joint is stable enough not to vibrate out of sensor range.

OBDII Installation

Where is the OBDII port located on the vehicle?

The OBDII port is a "D" shaped port that is usually on the driver's side under the dash board.

What is the calibration number when using the OBDII installation?

Using the DriveRight software set the VSS Pulse to "VSS Other" and 75000. This sets the Pulse per reading to 32 and then automatically sets the calibration number to 21475 for DR 500's and 37748 for DR 600's. If you are setting it manually the procedure is the same per the DriveRight User Guide starting on page 6.

VSS Installation

How do I find the wire with the VSS signal?

Contact the car dealer service center for that information or go to the Rostra website (www.rostra.com) and see the Rostra VSS and Tach Information System.

NOTE: Rostra is not affiliated with Davis Instruments. Rostra will not respond to Davis Instruments customer questions via phone or email. However, they have allowed us to direct our customers to their site for VSS information.

GD or HD Installation

While testing the DriveRight after GD or HD installation, I do not get the flashing dot.

The signal from the sensor is not reaching the DriveRight. Check all of your wiring for damage or bad connections. Ensure the sensor and magnet are aligned with each other and that the sensor is within 3/8"-5/8" (10-16 mm) of the magnet when it rotates in front of it. This is illustrated in the installation guide

Display

What happens when a driver enters a driver ID code not on the DriveRight 600 drivers list? Will the car start?

Yes the car will start. The only thing that will happen is the DriveRight will alarm to alert the driver he put in the wrong ID code. If he does not know the right code the alarm will stop after a short time. If he puts in three wrong codes the ID will go to 0000 and the alarm will stop. The data for that trip will go to the default driver of that vehicle or if there is no default driver for that vehicle the data will go to the "unknown" driver.

What happens when 600 trips are exceeded on the Trip 600 DriveRight?

After 600 trips, the DriveRight will write the next trip over the oldest trip data in the DriveRight.

Can I move the DriveRight console to a different vehicle?

Yes. The vehicle must be equipped with a full set of wiring and either the magnet / reed sensor, OBD cable or the VSS signal sensor. The magnet / reed (#8160GD), (#8160OBD) and VSS (#8160VSS) second-vehicle installation kits are available from Davis. See the DriveRight Products section of our web site.

My display is missing segments.

Sometimes heat can cause adverse reactions in the LCD display. Remove the DriveRight to a cool location for an hour or so. The display should return to normal. If your DriveRight has incurred some sort of shock or trauma that affected the LCD display, contact Technical support.

The display appears faded.

This indicates that you are on internal power and the battery is low. It should be replaced with a new 3- volt lithium battery.

There is nothing on the display.

Check that you have a battery installed and that the display is connected properly to its primary, unswitched 12-volt source. Unswitched means a source that is not turned off by the ignition key or other switch. If there is a battery installed but primary unswitched 12-volt power is not connected, the DriveRight will go into a sleep mode in five minutes if no keys are pressed. Pressing the MODE key will bring it out of sleep mode. Primary unswitched 12-volt power should be connected when the DriveRight is used in the vehicle.

There is nothing on the display and the lights are on.

This may occur when the DriveRight is attached to primary power while in sleep mode. To restore the DriveRight press the MODE key to bring it out of sleep mode. If the lamp is still on press the "+" key while in the current setting screen. This will turn the lamp off.

The readings on the display never change.

The DriveRight is locked-up. Reboot the display by pressing both the MODE and "+" key at the same time. No logged data, time/date, calibration or other settings will be lost when the station is rebooted.

I have a DriveRight in one vehicle that has many different drivers. How many drivers can use one DriveRight?

The DriveRight offers a Driver ID Code to differentiate between drivers. To monitor the driving of multiple drivers, assign each driver a unique 4-digit ID code. Access the Driver ID Code Entry Screen to enter the Driver ID code. Each DriveRight can support up to 9999 drivers using ID codes 0001 to 9999.

Incorrect or Missing Readings

My VSS installation DriveRight reads a very high mph when I'm hardly moving or at a stop.

Usually this type of problem is the result of some kind of noise from somewhere in the vehicle. It also could be the result of a loose connection. Sometimes the inline splice on the power supply or the T-tap connectors on the VSS wires don't make good connection. Check those connections to make sure they are secure. Also the butt splices from the harness connections sometimes cause problems. Make sure these are crimped well. Sometimes connecting the ground wire directly to the negative terminal of the battery, instead of the metal chassis of the vehicle, helps. I would double check the VSS signal wire. The following website has information on where to find the proper wire: <http://www.rostra.com>. Select Technical Support when you get to the home page and then fill in year, make and model. It will give you the VSS wire color and location.

Another thing that could cause this problem is the vehicle's alarm system. Somehow the alarm system can interfere with the VSS signal and cause this problem. Most likely the VSS wire is also being used by the vehicles alarm system. A symptom of this is when DriveRights are recording distances when the car is parked. You can confirm this by going to the Login screen and seeing if the small decimal point on the bottom left of the screen toggles on and off while the vehicle is parked - this decimal point changes state when the VSS signal input changes state. If this is the case, we do have a new installation system that connects the DriveRight to the vehicle by just plugging in to the vehicle's OBD II port. This might be a solution in this case.

I get no speed or distance reading.

The signal from the sensor is not reaching the DriveRight. Check all of your wiring for damage or bad connections. Ensure the sensor and magnet are aligned with each other and that the sensor is within 3/8"-5/8" (10-16 mm) of the magnet when the magnet rotates in front of it. See your installation manual.

My speed reading is very high or erratic.

Your DriveRight may not be calibrated properly. Refer to your user's guide for the proper calibration procedure. Calibrating at 25 miles per hour will bring the acceleration, velocity and distance readings to a reasonable value. Calibrating the DriveRight to a distance over 20 miles (32 kilometers) will yield very accurate acceleration, velocity and distance readings.

The distance is too low or too high.

Your DriveRight may not be calibrated properly. Refer to your user's guide for the proper calibration procedure. Calibrating at 25 miles per hour will bring the acceleration, velocity and distance readings to a reasonable value. Calibrating the DriveRight to a distance over 20 miles (32 kilometers) will yield very accurate acceleration, velocity and distance readings.

The start and stop times are incorrect.

Check the time and date on the DriveRight. If these are not correct the start and stop times will be affected. Ensure that the signal from the sensor did not quit during operation. This will cause the DriveRight to believe the vehicle had stopped.

Alarms

What acceleration or deceleration alarm should I set?

This will depend on how the DriveRight and vehicle will be used. Do you want to know if the driver uses the brake too much or only if the vehicle is decelerated at a rate that is dangerous or near to skidding? You will have to drive the vehicle and observe the readings that occur during normal operation before you can determine what is excessive.

The alarm goes off when it should not.

Check your high speed and high acceleration readings against the values in the limits screen. The alarm will sound when the speed, acceleration or deceleration values exceed the user set limits. If the high recorded values do not appear correct you may be getting erroneous readings due to loose or bad connections to the sensor. Check all of your wiring for damage or bad connections.

Battery / Power

How long will the 3 volt lithium battery last?

The DriveRight battery should last around four to six months. This is dependant upon how frequently and how long the DriveRight is left on battery power. The three volt lithium battery has about 1300 mA hours. The DriveRight will draw approximately 5 mA while awake and about 300 uA when it is in sleep mode.

The battery indicator is on when the DriveRight is not connected to the vehicle's battery.

This is correct. The BAT light indicates that the internal 3-volt lithium battery is in use.

Will I lose data if the back-up battery is removed?

No, the data is stored in non-volatile memory and cannot be lost due to power loss. The time and date however will be lost and must be reset before placing the DriveRight back in a vehicle.

I lose time and the date when I re-power.

That is correct. If your DriveRight is locked up and you remove power to restart it you will lose the time and date. If you are a driver and in a remote location and you do not have a settings code you will not be able to reset the time and date. The better way to restart/reset the DriveRight is to reboot using "+" and "mode" keys. This reboot does not affect the date or date.

The BAT indicator is always on.

The BAT indicator will be on when you are only connected to the internal 3-volt lithium battery. Ensure that your primary power (12-volt source) is unswitched and has not been turned off by the ignition. "Unswitched" means a source that is not turned off by the ignition key or other switch. Check the fuse and wiring to primary power and ground for damage or bad connections.

When I turn the vehicle off, the DriveRight turns off.

You are not connected to an unswitched 12-volt DC source. Unswitched means a source that is not turned off by the ignition key or other switch. Refer to your installation manual for possible locations of an unswitched 12-volt DC source. The fuse box is a likely location. Important: Do not connect to a 12-volt source that is used by safety related equipment such as the horn, headlights, brakes, etc.

Can the DriveRight drain my car battery since it is connected to unswitched power?

A working DriveRight requires very little power and certainly would not drain a car battery. A DriveRight typically draws about 5 mA continuous and most car batteries are rated at over 60 Amp Hours.

My DriveRight does not function on Battery Power.

On some of our earlier DriveRights there was a problem with IC chip U10 coming loose. This would cause the DriveRight not to work on battery power. This condition would have to be fixed at the factory. Or your 3 volt Lithium backup battery is dead.

The 3 volt lithium battery I purchased at the store does not work in my DriveRight.

We have found out from some of our customers that when they buy different brands of 3 volt batteries from a store or third party they can be a little smaller in size, thereby not making good contact with the DriveRight battery clips. The solution for this is to just bend out the negative battery clip of the DriveRight so that it is making better contact with the battery.

Software

Where will I find the registration number for my DriveRight software?

If you are unsure where to look or have lost items you're in luck. We placed this very important number in two locations: on the registration card that comes with the product and on the front cover of the manual.

My computer does not find the DriveRight on Auto Detect. What do I do now?

If the auto-detect feature does not find the DriveRight then there could be a problem with your serial port or your serial port setup or a conflict between ports.

Take the following steps if the software does not communicate with a DriveRight:

Check to make sure the DriveRight console is in the CURRENT mode instead of in sleep mode. If the LCD screen is blank, the console is in sleep mode. Press the MODE key to put the console in active mode.. Check that the correct serial port is selected. If you have other programs running which use the serial port, such as the Palm HotSync Manager and the CarChip software, close those programs and try again. Check if the hardware is ok and that you have a working communication port. If necessary, please contact your computer vendor's Technical Support to check your serial port and the serial port setup.

Can I differentiate the vehicles on which the DriveRight is used?

Yes, but only with the Fleet Management Software. Every DriveRight has an internal ID number that is visible only in the DriveRight software. This ID number is matched to a vehicle database to ensure that the data is not downloaded to another vehicle's database.

Can I tell when and for how long the vehicle stopped throughout the day?

Yes, with the DriveRight 600 and the Fleet Management Software (FMS). The DriveRight 600 logs the start and end time of each trip. Using the FMS, you can list the vehicle's trip statistics, including start and stop times, for whatever period you wish. This will tell you when the vehicle was in motion and when it wasn't.

Can I get information related to an accident from the DriveRight?

The DriveRight 600 has room in memory for 20 accident logs which show the vehicle's speed for the 20 seconds before and after a sudden deceleration. Information is written to the accident log any time the vehicle exceeds the unit's set deceleration limit. Also, the last 20 seconds of trip information for each of the last 20 trips is saved in the accident log. The information in the accident log may be downloaded, viewed, printed and stored using the Fleet Management Software.

I can't find the Driver Performance Score in the Fleet Management Software (FMS) version 3.0.0 and higher.

In the FMS the Driver Performance score was changed to the Driver Safety score. There is also a Driver Safety Score Summary Report.

I downloaded my DriveRight last week and again this week yet my download score in the Driver Safety Score Report is 0 and the max download days shows 100 although the Days since last download report shows 7 days.

The Download Score in the Driver Safety Score can sometimes be a bit confusing. The days since last download report is just that, the number of days since you "last" downloaded. Which, in this case, is 7 days. However in the Driver Safety Score report the column that is labeled Max Download Days is 100 because that is the largest number of days between downloads for the time span of the report.

When using the OBD Installation the vehicle speed is off and when I look at the calibration number it has changed.

The vehicle speed being off is probably caused by the change in calibration number. The calibration number changing by itself is a bug in VMS version 2.6.1. This bug was fixed in version 2.6.2 and is available for download on our website at no charge.

<http://www.davisnet.com/support/drive/software.asp>

I cannot download my DriveRight 600 via remote modem but the DriveRight 500 worked fine.

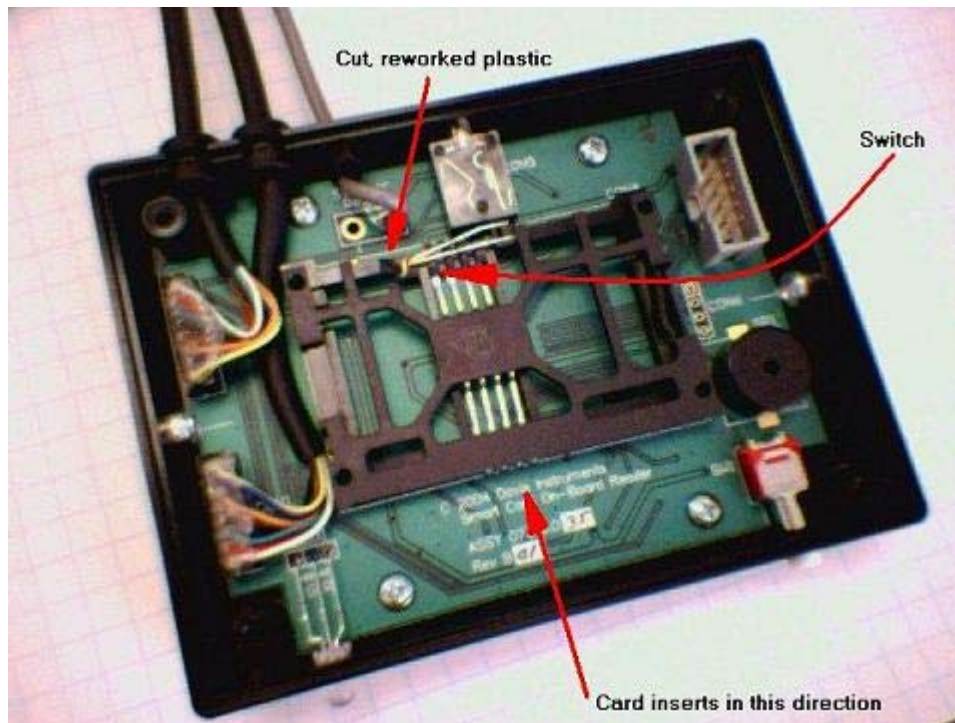
The DriveRight 600 and 500 communicate at different baud rates. In the field/remote modem you will need to program in the following commands AT&N0 or AT &N10 through HyperTerminal or similar communication programs. If a DriveRight 500 is used then the field/remote modem needs to be programmed with AT&N3.

Smartcard and Starter Interrupter

The SmartCard On Board Reader will not read cards and the LED is always orange.

We have seen a few older On Board Readers (OBR) that have a sticky "card switch". See image below. This is a switch inside that opens when a card is inserted. If the switch sticks open the reader will think a card is present at all times, even if one has not been inserted. What happens is that part of the switch rubs against some plastic and "hangs". Only Smart Cards shipped before September 2005 may have this problem.

The solution is to either trim the plastic near the end of the switch (this voids the warranty) or send the On Board Reader back to Davis for repair/replacement.

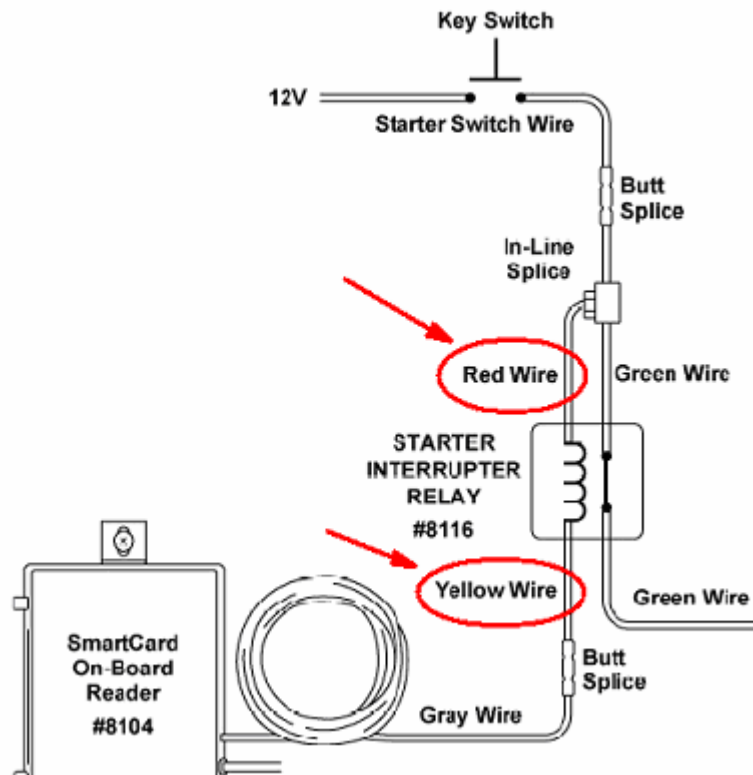


I connected the Starter Interrupter as per the instructions in the manual but when I insert an unauthorized SmartCard in the On-Board reader the vehicle still starts.

There may be one of two problems...

1. The diagram in the manual for the DriveRight SmartCard system on page 12 does not work on every vehicle. Use the Addendum to the 8116 Starter Interrupter kit. That addendum has a wiring diagram that will work on more vehicles and is actually easier. If you need this addendum you may download it from http://www.davisnet.com/support/drive/support_docs.asp?dtype=6

2. If the two power wires (red and yellow) on the Starter Interrupter are reversed during installation two MOSFETs and a diode will be damaged in the On Board Reader and a diode in the Starter Interrupter may also be damaged. The On Board Reader will still work as a login and downloading device but the Starter Interrupter will not function and will always allow the vehicle to be started.
 - a) The On Board Reader will need to be repaired.
 - b) If the Starter Interrupter's must be replaced.



After installing the FMS software it does not see my desktop reader.

The ACS setup installs 2 sets of drivers for Windows, namely PC/SC and proprietary USB drivers. By default the operating system allows the reader to run on PC/SC driver if it's present in the system. However, in order to use the ACS reader, you have to manually change the driver from PC/SC mode to proprietary mode. To do this use the instructions that came with the Desktop reader or contact Technical support at 510-732-7814 or support@davisnet.com for the instructions.

Can you assign multiple vehicles to one driver with the SmartCard?

Yes, you can authorize up to five vehicles for a driver with the SmartCard. From the FMS software go to SmartCard/Setup Card. Select the driver. In the Vehicle (in the database) window all the vehicles in the database are listed. Highlight the vehicle you want to authorize for that driver and select the right arrow so that vehicle moves over to the Authorized Vehicle window. If you want to authorize another vehicle repeat this procedure. Select the Set button and this will authorize those vehicles for that particular driver.

There is no SmartCard Menu in my software.

Only FMS version 3.3.0 and later has support for the Davis SmartCard device

GPS Module

Can I use the GPS Module with my DriveRight 500?

No you must have a DriveRight 600 to use the GPS module.

After connecting my GPS module and antenna it does not function.

The Fleet Management software must be used to set the DriveRight to enable the GPS system. The DriveRight software controls the application of power to the GPS module which in turn supplies voltage to the GPS antenna/receiver.

With your DriveRight GPS system can you track the Driver in "real time"?

No, Our GPS systems are passive. That is it only listen and log GPS coordinates. It does not transmit latitude and longitude. You will not be able to check on where a vehicle currently is located. You can only download the data for "after the fact" mapping.

Access Code

I forgot my PIN number.

The default code from the factory is 0000. If you entered a new code there is no way you can access the settings screens of the DriveRight without entering this number. See your DriveRight Download Administrator for assistance in resetting the PIN code.

Davis Instrument's National Service Center can return your DriveRight code to the default for a fee.